CONSTRUCTION STORMWATER GENERAL PERMIT INSPECTION REPORT

State of Washington Department of Ecology

Section A: General Data

Ecology Inspector(s): Carol Serdar Contaminated CSWGP Inspector Phone: 360.742.9751 Email: carolserdar@ecy.wa.gov	On-Site Representative Name: Thom Fischer Title: Electron Hydro LLC, permittee Additional Participants:	Inspection Date and Entry/Exit Time: 21 Sept 2020, 9:00/14:00	Inspection Type: ERTS and CSWGP review
		Receiving waters: Puyallup River	Permit webpage: https://fortress.wa.gov/ecy/paris/FacilitySummary.aspx?FacilityId=70091

Section B: Background

Note: See Corrections Required Form

The Electron Hydro LLC Intake project is covered under the State of Washington's Construction Stormwater General Permit (CSWGP). The CSWGP is a National Pollutant Discharge Elimination System (NPDES) and a State Waste Discharge permit for discharge of construction-related stormwater. Carol Serdar had previously been to the site a few years' prior, during the JARPA review for the then proposed re-construction of the barrier dam and intake structure; and on 11 August 2020 in response to ERTS699710; and 17 August 2020 for a CSWGP compliance inspection.

This inspection incorporates a review of the CSWGP site, discussions and observations related to ERTS700385 (fish kill), and ERTS700706 (wetland filling). These two ERTS are not within or near the CSWGP site and have implications related to hydro operations. The two ERTS are included for ease of reference, and follow-up will occur outside of the CSWGP.

Carol met with Electron Hydro representative Thom Fischer at the hydro office then drove separately to various locations within the Electron Project.

Weather at time of inspection: overcast and 60s

Precipitation in the past 24 hours?

☑ Yes

☐ No

On site observations:

Forebay:

Excavation of sediment from forebay appears to be 15-20 feet thick in some areas of removal; sediment composition is very fine clay. The material is stockpiled in an area adjacent to the maintenance yard at the forebay. Jerry, an Electron employee, met up with Thom and Carol and walked around the stockpile of sediment removed from the forebay. Straw has been applied (some areas need more) to the side slopes of the stockpile; discussed SWMMWW BMP specifics and seeding should be applied now as well as on the top of stockpile. There was no discharge from the area with the stockpile. Area around the stockpile has been clearcut for placement of additional fines. Thom explained this is the same practice PSE was using when he purchased the Project in November 2014.

ERTS7007006 was explained that the fish were trapped in the ponds as the water receded during dewatering.

Carol thought ERTS700385 related to wetland filling may have been at this portion of the Project. Thom reported there were no wetlands in the area of the stockpile or within the proposed expansion area.

Current work was being performed at the entrance to the forebay; flume connection to the forebay has been widened to direct flow of water toward the fish collection area. Entrance to the penstocks (concrete basin) was being cleaned out. (Unsure where water goes from this cleaning)

Discussed the need for monitoring of turbidity downstream of the powerhouse in the Puyallup River. Monitoring is needed to understand if the dewatering of the forebay and sediment maintenance creates a turbidity exceedance. This may occur when the penstocks fill with water and generation begins. (Unsure of current status of what is in the penstocks now)

Settling Basin:

The Settling Basin was essentially dry, some standing water in bottom from recent rain. When flume is carrying water into the basin, the basin is wider and about 1300 feet long which slows water and settles bedload (cobbles, sand, clay); while water is focused through the settling basin, an excavator removes sediment from the settling basin and piles sediment along the basin, then a bulldozer spreads the material out over the basin yard; sediment composition is sandy to coarse sand, with some fine clay. No excavator present. At the entrance of the settling basin, there was a pile of fist-sized cobbles that had dropped out of the suspended bedload as the velocity slowed. Thom explained this is the same practice PSE was using when he purchased the Project in November 2014.

Carol asked about ERTS700385 related to wetland filling may have been in this portion of the Project. Based on satellite imagining it appeared that a lot of ground was covered with the sediment excavated out of the settling basin. Thom did not believe there were any wetlands filled in the area of the sediment application.

The area of filling is extensive and the edge has a very large, concave, deep-seated landslide that failed in January - February 2020 storm events. Thom was unsure if this failure discharged into the Puyallup River. Carol expressed that she will need to walk to the river, another day.

CSWGP area:

SWPPP map on wall of office at intake structure, it needs to be updated with all additions and removals of BMPs.

Concrete stairs had been poured, and exposed and unworked soil on steep slope is now stabilized.

Haul road has been stabilized with gravel; adjacent slope to the intake structure had been previously exposed and unworked, has been stabilized with jute mat; discussed potential for need of additional BMP if stormwater rills the slope. Survey work of river bed was in progress. Discussed movement of rock and sediment used in construction around the site.

Stormwater pond has been disconnected to the stormwater conveyance system.

Walked along the river's edge for about 100 feet, Carol did not observe any crumb rubber bits or pieces of sports turf. It was not feasible to drive to other side of the river to observe ground around the fish ladder.

Post inspection conversations:
After closer review of ERTS700385 and confirmation from complainant the wetland is found south of the forebay. Thom and Carol reviewed this location over phone while looking at Google maps. Carol will observe the wetland and trench to the south of the forebay on 30 September 2020 compliance inspection and Project site visit.

Section C: Compliance

Note: 21Sept2020 site visit includes small review of CSWGP area; site visit includes area outside CSWGP area this includes ERTS700385 and ERTS700706

Inspection Checklist
This was not a complete CSWGP compliance inspection; observed the SWPPP map (not completely up-to-date), the remaining CSWGP paperwork was not reviewed.

Violations and action required to achieve compliance	**Complete or submit date**	**Guidance**
No current compliance actions for the CSWGP. This report includes information related to two ERTS that are not within the CSWGP footprint, which will require follow up.		

ADDITIONAL RESOURCES FOR COMPLIANCE:

For assistance with any of these compliance issues or recommendations regarding BMPs, please see the 2014 (or 2019) Stormwater Management Manual for Western Washington (SWMMWW), Volume II, Construction Stormwater Pollution Prevention which includes BMPs for Source Control and Runoff Conveyance and Treatment BMPs. The full SWMMWW is available at: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to $10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

Noncompliance with the limits, monitoring requirements, terms and/or conditions established in your permit may result in formal enforcement action by the Department of Ecology.

Ecology Inspector (signature): Carol Serdar Date: 8 September 2020
Ecology Inspector (print name): Carol Serdar

Water Quality Program
Southwest Regional Office
PO Box 47775 Olympia, WA 98504-7775
SWRO Tel: 360-407-6300

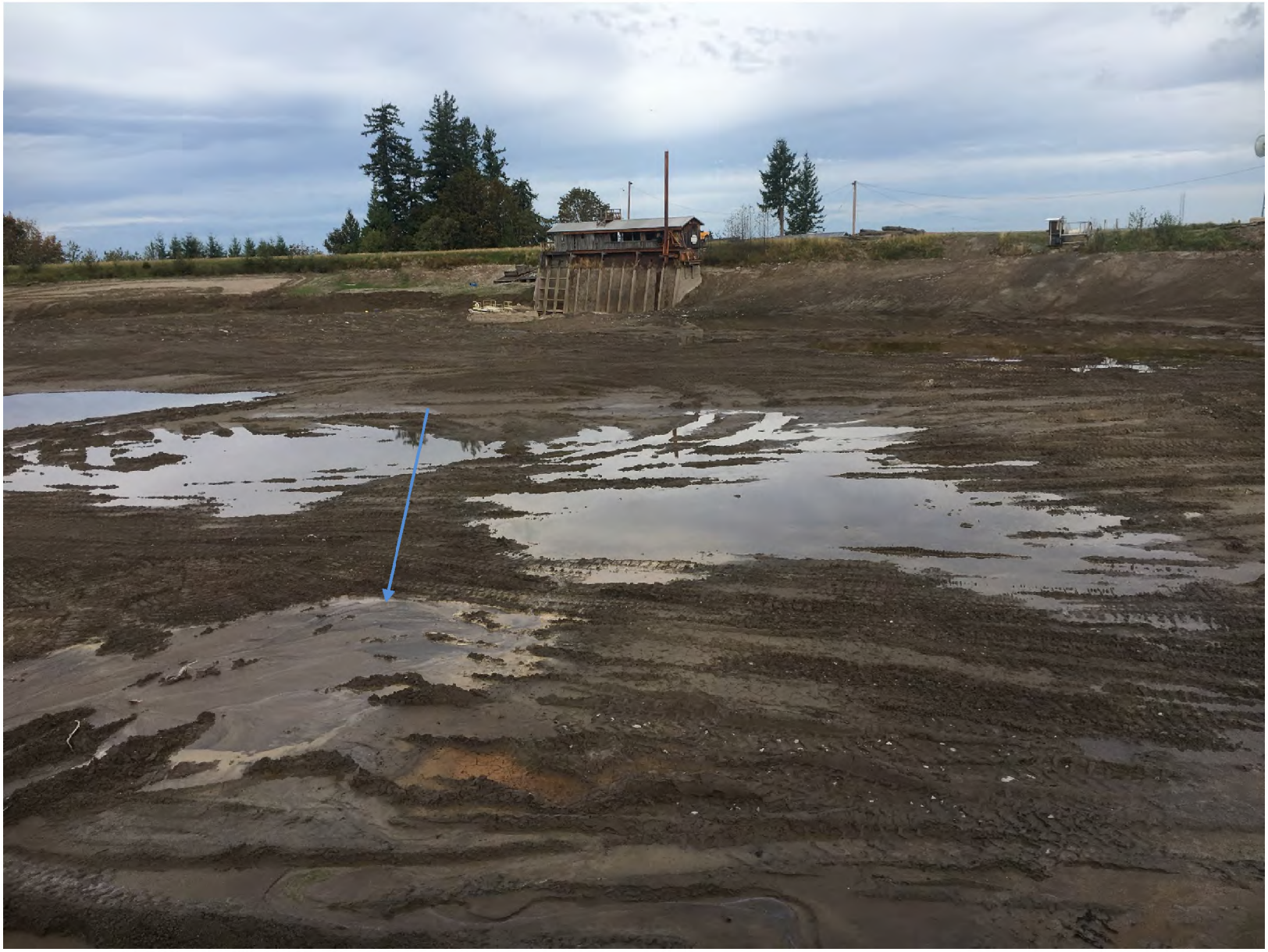
All photos taken by Carol Serdar

Photo 1

Photo Description: Forebay area – flume enters forebay at the right, behind large rocks.

Date:2020/09/21

Photo 2
Photo Description: Forebay area – forebay, recent rain added more fines.



Date:2020/09/21

Photo 3
Photo Description: Forebay area – forebay, recent rain added more fines; fish collection facility on left of photo.

Date:2020/09/21

Photo 4

Photo Description: Forebay area – forebay, recent rain added more fines.

Date:2020/09/21

Photo 5

Photo Description: Forebay area – fine sediment excavated from the dewatered forebay and stockpiled near the forebay.

Date:2020/09/21

Photo 6

Photo Description: Forebay area – fine sediment stockpiled, forebay located in front of the satellite tower in mid-photo.

Date:2020/09/21

Photo 7

Photo Description: Forebay area – fine sediment stockpiled and straw had been applied; some areas need additional straw.

Date:2020/09/21

Photo 8

Photo Description: Forebay area – fine sediment stockpiled; no discharge from stockpile area was observed.

Date:2020/09/21

Photo 9

Photo Description: Forebay area – construction of flume entrance into forebay behind large rocks.

Date:2020/09/21

Photo 10

Photo Description: Forebay area – flume under construction, widening to change flow into forebay. A portion of the fish collection facility is on left side of photo.

Date:2020/09/21

Photo 11

Photo Description: Settling Basin area – settling basin has accumulated sediment on left bank (water would be flowing toward bottom of photo, right bank had been excavated and filled adjacent to basin.

Date:2020/09/21

Photo 12

Photo Description: Settling Basin area – small amount of water in the basin from recent rain in bottom of channel, there may be some side slope drainage into basin. Filling area with sediment occurs to left of basin in this photo and beyond.

Date:2020/09/21

Photo 13
Photo Description: Settling Basin area – sandy to coarse sand sediment is fill adjacent to the settling basin. Photo was taken with back to settling basin.

Date:2020/09/21

Photo 14

Photo Description: Settling Basin area – cobbles had dropped out of suspension; side wall needs repair, note the slumping of top of sidewall.

Date:2020/09/21

Photo 15

Photo Description: Settling Basin area – sandy to coarse sand sediment is filled adjacent to the settling basin.

Date:2020/09/21

Photo 16

Photo Description: Settling Basin area – sandy to coarse sand sediment is filled adjacent to the settling basin. Puyallup River is in valley bottom.

Date:2020/09/21

Photo 17

Photo Description: Settling Basin area – large deep-seated landslide, sandy to coarse sand sediment is filled adjacent to the settling basin. Panorama view.

Date:2020/09/21

Photo 18

Photo Description: Settling Basin area – Sandy to coarse sand sediment is filled adjacent to the settling basin. Large deep-seated landslide, occurred during storms of Jan-Feb 2020; unsure if landslide delivered sediment to the Puyallup River. Carol will return to walk landslide deposit runout.

Date:2020/09/21

Photo 19

Photo Description: Settling Basin area – toe of large deep-seated landslide evacuated into forestland below, delivery to Puyallup River is unknown.

Date:2020/09/21

Photo 20

Photo Description: Settling Basin area – large deep-seated landslide, delivery to Puyallup River is unknown. Puyallup River is at bottom of valley.

Date:2020/09/21

Photo 21

Photo Description: Intake Structure Construction area – looking downstream through construction area; river in by-pass channel in black liner, upstream end of fish ladder was seen right side of black liner.

Date:2020/09/21

Photo 22
Photo Description: Intake Structure Construction area – looking downstream through construction area; river in by-pass channel in black liner.

Date:2020/09/21

Photo 23
Photo Description: Intake Structure Construction area – gravel had been placed on the haul road; previously exposed and unworked side slope has been temporarily stabilized.

Date:2020/09/21

Photo 24

Photo Description: Intake Structure Construction area – upstream portion of construction area.

Date:2020/09/21

Photo 25
Photo Description: Intake Structure Construction area – upstream portion of construction area; fish ladder entrance and by-pass channel in black liner (turf below black liner).

Date:2020/09/21

Photo 26
Photo Description: Intake Structure Construction area – looking downstream, intake structure on left and river is within black liner on right.

Photo 27
Photo Description: Intake Structure Construction area – jute matting on previously exposed and unworked soil; discussed there may be a need for additional BMPs.

Date:2020/09/21

Photo 28
Photo Description: Intake Structure Construction area – upstream construction area; survey of streambed.

Photo 29
Photo Description: Intake Structure Construction area – concrete stairs had been poured, slope now stabilized.

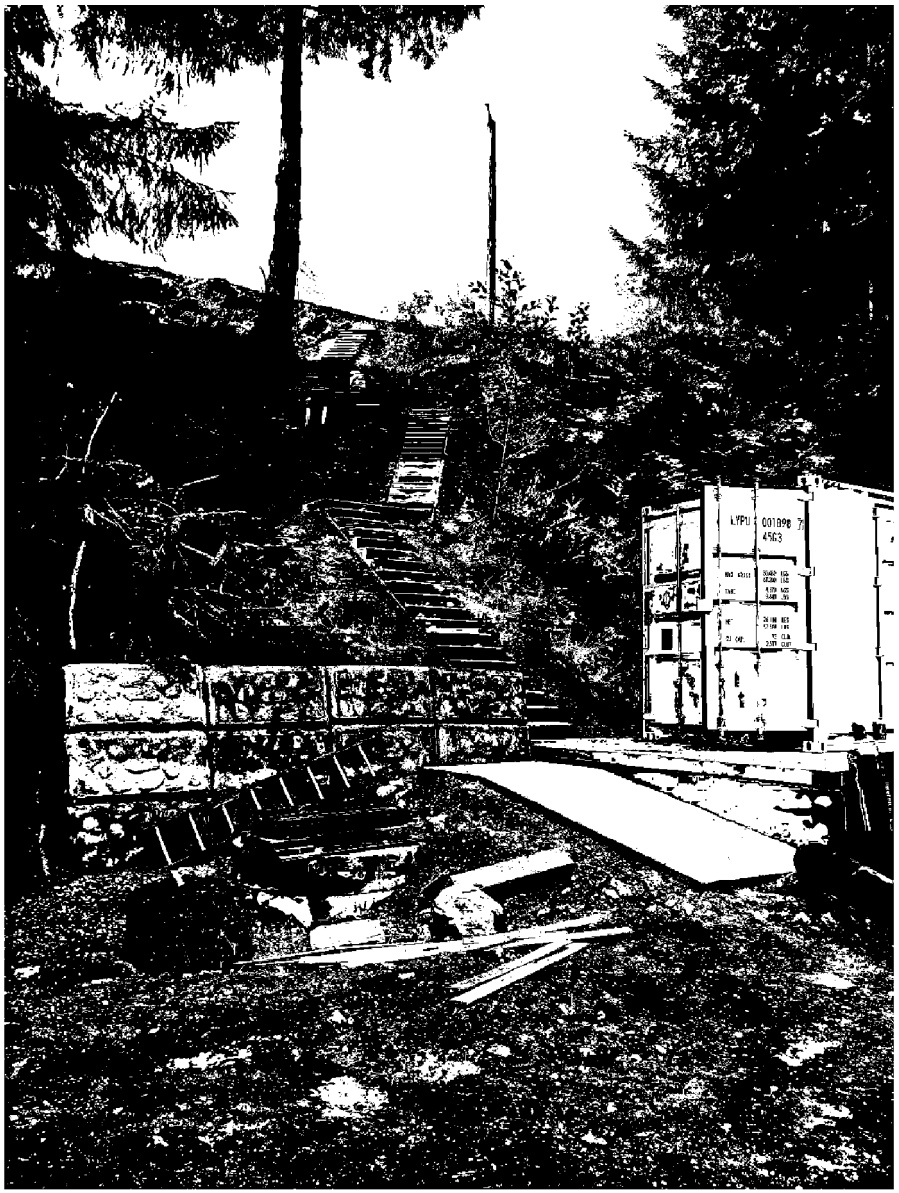


Photo 30
Photo Description: Intake Structure Construction area – downstream of construction near stormwater pond, no crumb rubber bits or sports turf found.

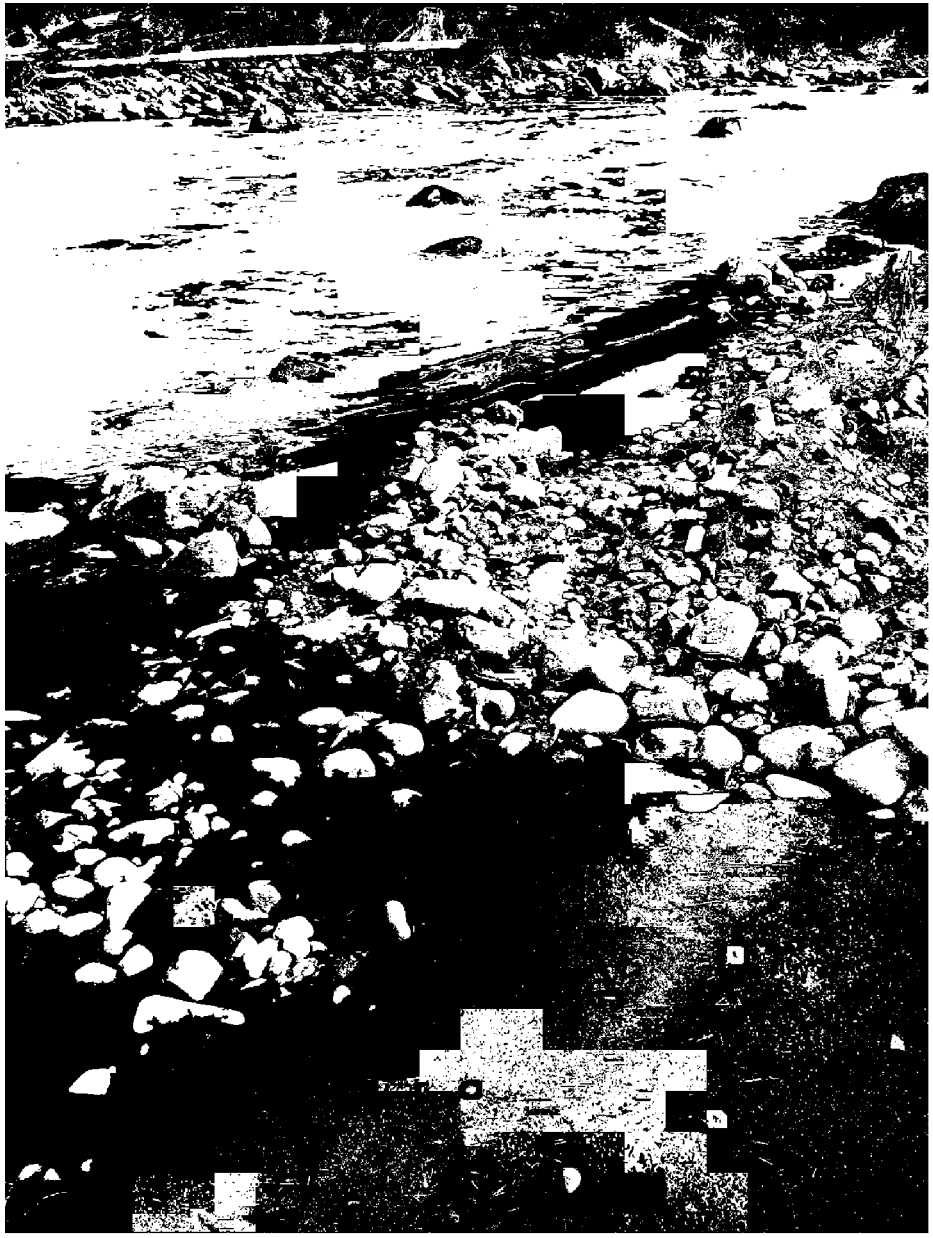
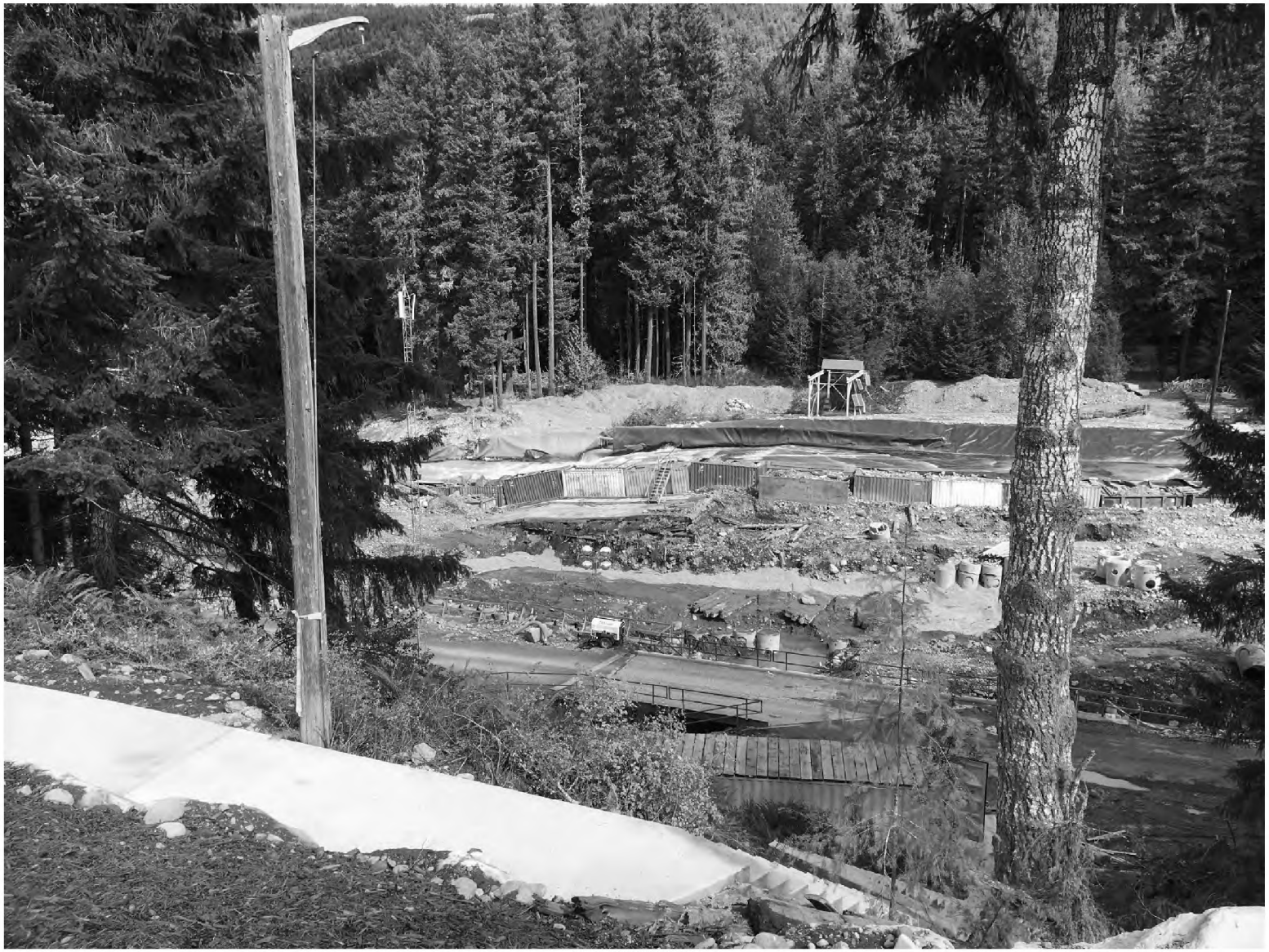


Photo 31
Photo Description: Intake Structure Construction area – SWPPP map with updates to installation and removal of BMPs.

Date:2020/09/21

Photo 32

Photo Description: Intake Structure Construction area – concrete stairs have been poured and area stabilized; note by-pass channel in black liner, some slumping of soil below the black liner may be occurring along the right bank, downstream of fish ladder entrance.



Date:2020/09/21

Photo 33

Photo Description: Intake Structure Construction area – concrete wash area, no discharge from area.

Date:2020/09/21

Photo 34

Photo Description: Intake Structure Construction area – secondary containment.

Date:2020/09/21

Photo 35
Photo Description: Electron Hydro Office parking lot area – conex box with debris removed from the river (more than sports turf).

Date:2020/09/21

Photo 36
Photo Description: Electron Hydro Office parking lot area – conex box with debris removed from the river, sports turf in super sacks and plastic bags.

Date:2020/09/21